Having described the invention, the following is claimed:

1. A refractory component for protecting a bottom metal shell of a metallurgical vessel, comprising:

a pre-assembled impact pad comprised of a plurality of pre-formed, high-temperature, high-density refractory bricks held in a close-packed configuration, said pad having an upper impact surface; and

a monolithic slab of a high-temperature cast refractory material encasing said pad, said slab being cast around said pre-assembled impact pad and being dimensioned to form a refractory lining over the bottom of a metallurgical vessel and encasing said pad.

2. A refractory component as defined in claim 1, wherein said bricks are joined together by a bonding composition.

3. A refractory component as defined in claim 2, wherein said bonding composition is comprised of milled refractory material in a resin matrix.

4. A refractory component as defined in claim 3, wherein said bonding composition is comprised of about 60% to 85% by weight of refractory fines and about 15% to about 40% by weight of a polymeric resin.

5. A refractory component as defined in claim 1, wherein at least a portion of said upper impact surface is exposed.

6. A refractory component as defined in claim 4, wherein said refractory fines are comprised of alumina, and said polymeric resin is resol phenolic resin.

7. In a metallurgical vessel for receiving and dispensing a molten metal, a refractory component comprised of:

a pre-assembled impact pad comprised of a plurality of pre-formed refractory bricks held together in a close-packed configuration, said pad having an upper impact surface; and

a monolithic slab of a high-temperature, cast refractory material encasing said pad, said slab being cast around said pre-assembled impact pad and being dimensioned to form a refractory lining over the bottom of a metallurgical vessel and encasing said pad.

8. A refractory component in a metallurgical vessel for receiving and dispensing a molten metal as defined in claim 7, wherein said refractory bricks forming said impact pad are bonded together.

9. A refractory component in a metallurgical vessel for receiving and dispensing a molten metal as defined in claim 8, wherein said refractory bricks are bonded together by a bonding compound securing each refractory brick to an adjacent refractory brick.

10. A refractory component in a metallurgical vessel for receiving and dispensing a molten metal as defined in claim 9, wherein said bonding composition is comprised of about 60% to 85% by weight of refractory fines and about 15% to about 40% by weight of a polymeric resin.

11. A refractory component in a metallurgical vessel for receiving and dispensing a molten metal as defined in claim 10, wherein said refractory fines are comprised of alumina, and said polymeric resin is resol phenolic resin.

12. A refractory component in a metallurgical vessel for receiving and dispensing molten metal as defined in claim 7, wherein at least a portion of said upper impact surface is exposed.

13. A method of forming a refractory component for lining the bottom of a metallurgical vessel, comprising the steps of:

(a) forming an impact pad by assembling a plurality of pre-formed, high-density, high-temperature refractory bricks into a pre-formed structure wherein said bricks are maintained in a close-packed arrangement and said impact pad is movable as an integral unit;

(b) positioning said pad at a predetermined location in a cavity defining the bottom of said vessel, said pad having an upper impact surface;

(c) pouring a high temperature refractory material into a cavity around said pad; and

(d) curing said refractory material to form a monolithic slab wherein said pad is encased within said slab.

14. A method of forming a refractory component for lining the bottom of a metallurgical vessel as defined in claim 13, wherein said impact pad is assembled by adhering each refractory brick to another by a bonding composition.

15. A method of forming a refractory component for lining the bottom of a metallurgical vessel as defined in claim 14, wherein said cavity is a mold.

16. A method of forming a refractory component for lining the bottom of a metallurgical vessel as defined in claim 15, further comprising the steps of:

removing said refractory component from said mold;

inserting said refractory component into the bottom of said metallurgical vessel; and

filling a gap between said refractory component and said metallurgical vessel with a refractory material.

17. A method of forming a refractory component for lining the bottom of a metallurgical vessel as defined in claim 16, wherein said refractory material filling said gap is a refractory ramming material.

18. A method of forming a refractory component for lining the bottom of a metallurgical vessel as defined in claim 14, wherein said cavity is the bottom of said metallurgical vessel.

19. A method of forming a refractory component for lining the bottom of a metallurgical vessel as defined in claim 13, wherein said cavity is defined by the

bottom of a metallurgical vessel, said impact pad is assembled in said vessel and said high-temperature refractory material is poured into said vessel.

20. A pre-formed impact pad comprised of:

a plurality of high-density, high-temperature refractory bricks bonded together into a predetermined shape by a bonding composition, said bonding composition comprised of about 60% to 85% by weight of refractory fines having a particle size of less than 100 Tyler mesh (150 μm), and about 15% to 40% by weight of a polymeric resin; and

a plurality of projections extending outwardly from the sides thereof.

21. A pre-formed impact pad comprised of:

a plurality of high-density, high-temperature refractory bricks bonded together into a predetermined shape by a bonding composition, said bonding composition comprised of about 60% to 85% by weight of refractory fines having a particle size of less than 100 Tyler mesh (150 μm), and about 15% to 40% by weight of a polymeric resin; and

a plurality of projections extending outwardly from the sides thereof, wherein said projections are refractory bricks oriented to extend from the sides of said impact pad.